



Analysis of Multiple Serology Test Evaluations of the “COVID-19 One Step, COVID-19 Test (Immunochromatography Assay)” from Guangzhou Wondfo Biotech Co., Ltd.

September 28, 2020

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1 Introduction

The COVID-19 One Step, COVID-19 Test (Immunoassay) from Guangzhou Wondfo Biotech Co., Ltd. was evaluated more than once at the Frederick National Laboratory for Cancer Research (FNLCR), a Federally Funded Research and Development Center (FFRDC) sponsored by the National Cancer Institute (NCI). Combining results from multiple evaluations is appropriate because the study protocol did not change, including the inclusion and exclusion criteria used to select the samples used for each evaluation, and because the devices used in the evaluations were the same. The COVID-19 One Step, COVID-19 Test (Immunoassay) is intended to qualitatively detect IgM and IgG together without differentiating between the two. For the details of the individual evaluations, see the corresponding evaluation reports.

Table 1: Evaluation results included in this analysis

Evaluation ID	Date(s) Performed	Lot Number(s)	Panel
maf3279-a001	2020-04-21	W19500328	Panel 1
maf3337-a001	2020-08-06	W19500310	Panel 2

1.1 Panel composition

For detailed information on the panels used in these evaluations, see the evaluation test reports. The serum and plasma samples used in each evaluation panel have not been restricted for use to only a single panel. Serum and plasma samples shared between panels have the same Sample ID in the line data for the evaluations. Where a serum or plasma sample was tested more than once, only one result was reported for the calculations in this report. If the results on the sample were the same between/amongst evaluations, the result with the earliest date was reported. If the results on the sample were not the same between/amongst evaluations, the result showing the worst-case performance was reported. For antibody-positive samples, this resulted in the combined panel composition shown in Figure 1.

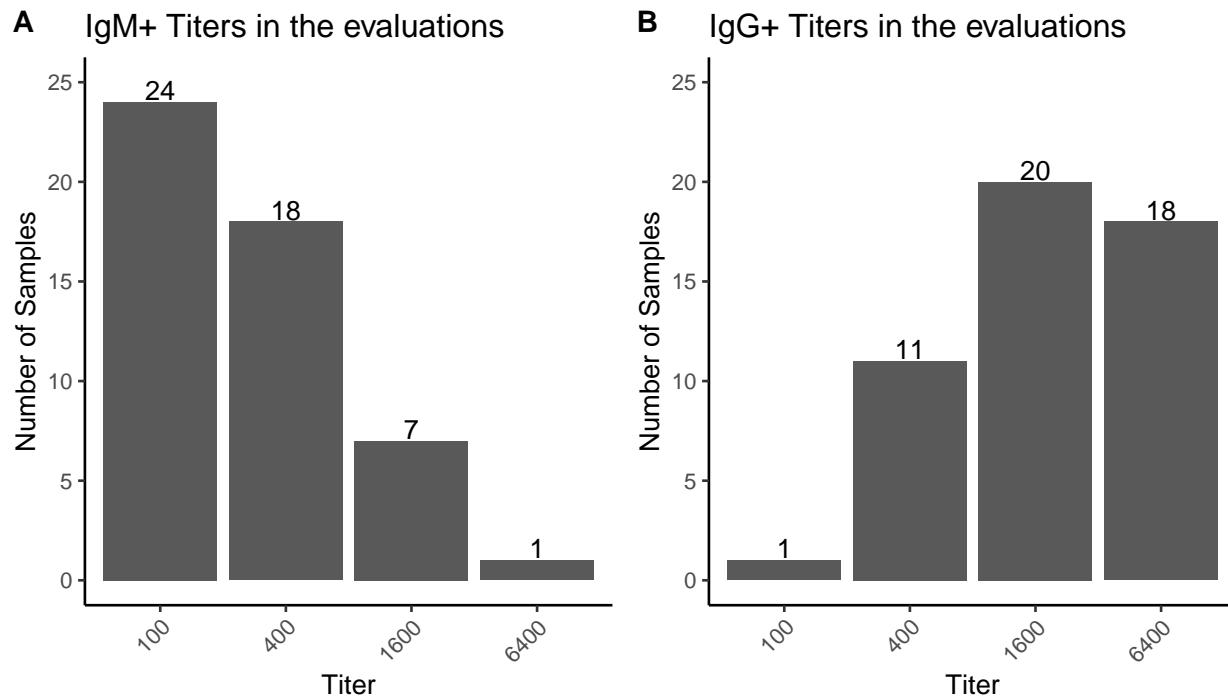


Figure 1: Titer levels for (A) IgM+ and (B) IgG+ samples according to the CDC SARS-CoV-2 Spike antigen assay

1.2 Analysis

Samples used in these evaluations were not randomly selected, and sensitivity (PPA) and specificity (NPA) estimates in this report may not be indicative of the real-world performance of the Guangzhou Wondfo Biotech Co., Ltd. COVID-19 One Step, COVID-19 Test (Immunoassay). Sensitivity and specificity were calculated for each antibody (e.g., IgM, IgG, IgA, and Pan-Ig, as applicable) separately. In addition, sensitivity and specificity were estimated in a combined manner, where a positive result for any antibody the Guangzhou Wondfo Biotech Co., Ltd. COVID-19 One Step, COVID-19 Test (Immunoassay) is intended to detect was considered as a positive test result and a negative result meant that a sample tested negative for all antibodies the Guangzhou Wondfo Biotech Co., Ltd. COVID-19 One Step, COVID-19 Test (Immunoassay) is intended to detect. Positive and negative predictive values were calculated for combined sensitivity and specificity assuming a prevalence of 5%. Cross-reactivity with HIV+ was evaluated, and results are presented separately. If cross-reactivity was detected, the samples with HIV+ were not included in calculations of specificity.

Confidence intervals for sensitivity and specificity were calculated per a score method described in CLSI EP12-A2 (2008).¹ Confidence intervals for PPV and NPV were calculated using the values from

¹CLSI. *User Protocol for Evaluation of Qualitative Test Performance; Approved Guideline—Second Edition*. CLSI doc-

the 95% confidence intervals for sensitivity and specificity. For evaluation of cross-reactivity with HIV+, it was evaluated whether an increased false positive rate among antibody negative samples with HIV was statistically higher than the false positive rate among antibody negative samples without HIV (for this, a confidence interval for the difference in false positive rates was calculated per a score method described by Altman.²)

1.3 Important caveats

Sensitivity and specificity estimates in this report may not be indicative of the real world performance of the Guangzhou Wondfo Biotech Co., Ltd. COVID-19 One Step, COVID-19 Test (Immunoassay).

These results are based on serum and plasma samples only and may not be indicative of performance with other sample types, such as whole blood, including finger stick blood.

The number of samples in the panel is a minimally viable sample size that still provides reasonable estimates and confidence intervals for test performance, and the samples used may not be representative of the antibody profile observed in patient populations.

For more detailed information on the evaluation procedure, including any deviations, please see the individual test reports for each evaluation.

1.4 Additional notes, anomalies, and clarifications for maf3337-a001

The FNLCR provided the following additional information:

The Instructions for Use indicate that "Serum or Plasma specimens may be stored at -20°C for up to 9 days." However, Panel 2 samples have been stored >9 days frozen at -80°C.

ument EP12-A2. Wayne, PA: Clinical and Laboratory Standards Institute; 2008. See https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfStandards/detail.cfm?standard_<_identification_no=31791.

²Statistics with Confidence: Confidence Intervals and Statistical Guidelines. (2013). Wiley.

2 Results

Table 2: Summary Results

COVID-19 One Step, COVID-19 Test (Immunochro- matography Assay)	Comparator Method			Collected pre-2020		Total	
	Antibody Positive			Antibody Negative			
	IgM+, IgG+	IgM+, IgG-	IgM-, IgG+	Negative	HIV+		
(IgM / IgG)+	50			1		51	
(IgM / IgG)-				116	10	126	
Total	50			117	10	177	

Table 3: Summary Statistics

Measure	Estimate	Confidence Interval
(IgM / IgG) Sensitivity	100% (50/50)	(92.9%; 100%)
(IgM / IgG) Specificity	99.2% (126/127)	(95.7%; 99.9%)
Combined Sensitivity	100% (50/50)	(92.9%; 100%)
Combined Specificity	99.2% (126/127)	(95.7%; 99.9%)
Combined PPV for prevalence = 5.0%	87.0%	(53.1%; 97.4%)
Combined NPV for prevalence = 5.0%	100%	(99.6%; 100%)
Cross-reactivity with HIV+	0.0% (0/10), not detected	

3 Line Data (all)

In the table below, "Days" refers to "Days from symptom onset to blood collection."

Table 4: Line Data (all)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0010	Positive	Pass	Serum	1600	400	1600	29	Positives
maf3279-a001	C0037	Positive	Pass	Serum	400	100	1600	19	Positives
maf3279-a001	C0038	Positive	Pass	Serum	100	100	100	20	Positives
maf3279-a001	C0040	Positive	Pass	Serum	1600	400	1600	24	Positives
maf3279-a001	C0049	Positive	Pass	Serum	400	400	400	23	Positives
maf3279-a001	C0053	Positive	Pass	Serum	1600	1600	1600	28	Positives
maf3279-a001	C0061	Positive	Pass	Serum	1600	100	1600	26	Positives
maf3279-a001	C0064	Positive	Pass	Serum	1600	1600	6400	20	Positives
maf3279-a001	C0071	Positive	Pass	Serum	6400	1600	6400	20	Positives
maf3279-a001	C0074	Positive	Pass	Serum	400	100	400	24	Positives
maf3279-a001	C0080	Positive	Pass	Serum	1600	400	1600	29	Positives
maf3279-a001	C0084	Positive	Pass	Serum	6400	100	6400	24	Positives
maf3279-a001	C0090	Positive	Pass	Serum	1600	100	1600	22	Positives
maf3279-a001	C0092	Positive	Pass	Serum	1600	100	1600		Positives
maf3279-a001	C0102	Positive	Pass	Serum	400	400	400	25	Positives
maf3279-a001	C0107	Positive	Pass	Serum	6400	400	6400	36	Positives
maf3279-a001	C0119	Positive	Pass	Serum	1600	100	1600	20	Positives
maf3279-a001	C0122	Positive	Pass	Serum	400	100	400	24	Positives
maf3279-a001	C0127	Positive	Pass	Serum	400	400	1600	23	Positives
maf3279-a001	C0132	Positive	Pass	Serum	1600	1600	6400		Positives
maf3279-a001	C0136	Positive	Pass	Serum	6400	400	6400		Positives

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0144	Positive	Pass	Serum	6400	1600	6400	21	Positives
maf3279-a001	C0153	Positive	Pass	Serum	400	100	400	31	Positives
maf3279-a001	C0160	Positive	Pass	Serum	1600	100	1600	17	Positives
maf3279-a001	C0161	Positive	Pass	Serum	400	100	400	25	Positives
maf3279-a001	C0164	Positive	Pass	Serum	1600	400	6400	23	Positives
maf3279-a001	C0172	Positive	Pass	Serum	1600	400	1600	19	Positives
maf3279-a001	C0176	Positive	Pass	Serum	6400	400	6400	19	Positives
maf3279-a001	C0180	Positive	Pass	Serum	6400	1600	6400	24	Positives
maf3279-a001	C0191	Positive	Pass	Serum	400	100	400	22	Positives
maf3337-a001	C0031	Positive	Pass	Serum	1600	400	6400	21	Positive
maf3337-a001	C0049	Positive	Pass	Serum	400	400	400	23	Positive
maf3337-a001	C0053	Positive	Pass	Serum	1600	1600	1600	28	Positive
maf3337-a001	C0064	Positive	Pass	Serum	1600	1600	6400	20	Positive
maf3337-a001	C0071	Positive	Pass	Serum	6400	1600	6400	20	Positive
maf3337-a001	C0080	Positive	Pass	Serum	1600	400	1600	29	Positive
maf3337-a001	C0127	Positive	Pass	Serum	400	400	1600	23	Positive
maf3337-a001	C0132	Positive	Pass	Serum	1600	1600	6400		Positive
maf3337-a001	C0144	Positive	Pass	Serum	6400	1600	6400	21	Positive
maf3337-a001	C0145	Positive	Pass	Serum	6400	1600	6400	17	Positive
maf3337-a001	C0152	Positive	Pass	Serum	400	400	6400	24	Positive
maf3337-a001	C0153	Positive	Pass	Serum	400	100	400	31	Positive
maf3337-a001	C0172	Positive	Pass	Serum	1600	400	1600	19	Positive
maf3337-a001	C0187	Positive	Pass	Serum	6400	6400	6400	29	Positive
maf3337-a001	D0012	Positive	Pass	Serum	6400	100	6400	28	Positive
maf3337-a001	D0020	Positive	Pass	Serum	1600	400	6400	42	Positive

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	D0022	Positive	Pass	Serum	400	100	1600	46	Positive
maf3337-a001	D0028	Positive	Pass	Serum	6400	400	6400	32	Positive
maf3337-a001	D0084	Positive	Pass	Serum	1600	100	1600	41	Positive
maf3337-a001	D0104	Positive	Pass	Serum	400	100	400	17	Positive
maf3337-a001	D0149	Positive	Pass	Serum	400	100	400	43	Positive
maf3337-a001	D0159	Positive	Pass	Serum	100	100	400	24	Positive
maf3337-a001	D0161	Positive	Pass	Serum	1600	100	1600	44	Positive
maf3337-a001	D0180	Positive	Pass	Serum	6400	400	6400	39	Positive
maf3337-a001	D0188	Positive	Pass	Serum	400	400	1600	24	Positive
maf3337-a001	D0201	Positive	Pass	Serum	100	100	400	33	Positive
maf3337-a001	D0205	Positive	Pass	Serum	400	400	1600	26	Positive
maf3337-a001	D0206	Positive	Pass	Serum	1600	100	1600	25	Positive
maf3337-a001	D0208	Positive	Pass	Serum	400	100	1600	22	Positive
maf3337-a001	D0210	Positive	Pass	Serum	1600	100	1600	26	Positive
maf3279-a001	C0001	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0002	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0004	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0005	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0008	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0011	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0012	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0014	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0016	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0020	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0024	Negative	Pass	Serum	0	0	0		Negatives

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0027	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0029	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0032	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0033	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0034	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0041	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0043	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0044	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0048	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0050	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0051	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0058	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0059	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0062	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0063	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0065	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0066	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0067	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0069	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0070	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0072	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0073	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0079	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0081	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0083	Negative	Pass	Serum	0	0	0		Negatives

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0087	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0094	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0095	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0098	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0100	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0101	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0109	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0110	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0115	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0116	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0117	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0118	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0120	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0121	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0126	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0128	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0131	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0139	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0140	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0146	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0156	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0158	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0165	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0169	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0173	Negative	Pass	Serum	0	0	0		Negatives

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0174	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0179	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0181	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0185	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0186	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0193	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0198	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0199	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0200	Negative	Pass	Serum	0	0	0		Negatives
maf3337-a001	C0004	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0005	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0008	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0019	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0026	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0032	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0041	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0051	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0059	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0063	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0065	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0075	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0079	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0095	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0098	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0101	Negative	Pass	Plasma	0	0	0		Negative

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	C0103	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0105	Positive	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0109	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0117	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0121	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0133	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0134	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0137	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0140	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0156	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0162	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0179	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0185	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0193	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0196	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0198	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0199	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0007	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0011	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0015	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0027	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0034	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0047	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0049	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0056	Negative	Pass	Plasma	0	0	0		Negative

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	D0058	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0064	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0073	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0083	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0086	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0094	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0097	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0115	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0120	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0123	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0126	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0128	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0130	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0131	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0132	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0135	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0141	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0142	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0145	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0148	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0153	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0154	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0158	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0166	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0169	Negative	Pass	Serum	0	0	0		Negative

Table 4: Line Data (all) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	D0170	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0173	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0184	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0187	Negative	Pass	Plasma	0	0	0		Negative
maf3279-a001	C0018	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0018	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0054	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0054	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0089	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0089	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0093	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0093	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0099	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0099	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0138	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0138	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0150	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0150	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0155	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0155	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0182	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0182	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0197	Negative	Pass	Plasma	0	0	0		HIV+
maf3337-a001	C0197	Negative	Pass	Plasma	0	0	0		HIV+

4 Line Data (independent samples)

In the table below, "Days" refers to "Days from symptom onset to blood collection."

Table 5: Line Data (independent samples)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0010	Positive	Pass	Serum	1600	400	1600	29	Positives
maf3279-a001	C0037	Positive	Pass	Serum	400	100	1600	19	Positives
maf3279-a001	C0038	Positive	Pass	Serum	100	100	100	20	Positives
maf3279-a001	C0040	Positive	Pass	Serum	1600	400	1600	24	Positives
maf3279-a001	C0049	Positive	Pass	Serum	400	400	400	23	Positives
maf3279-a001	C0053	Positive	Pass	Serum	1600	1600	1600	28	Positives
maf3279-a001	C0061	Positive	Pass	Serum	1600	100	1600	26	Positives
maf3279-a001	C0064	Positive	Pass	Serum	1600	1600	6400	20	Positives
maf3279-a001	C0071	Positive	Pass	Serum	6400	1600	6400	20	Positives
maf3279-a001	C0074	Positive	Pass	Serum	400	100	400	24	Positives
maf3279-a001	C0080	Positive	Pass	Serum	1600	400	1600	29	Positives
maf3279-a001	C0084	Positive	Pass	Serum	6400	100	6400	24	Positives
maf3279-a001	C0090	Positive	Pass	Serum	1600	100	1600	22	Positives
maf3279-a001	C0092	Positive	Pass	Serum	1600	100	1600		Positives
maf3279-a001	C0102	Positive	Pass	Serum	400	400	400	25	Positives
maf3279-a001	C0107	Positive	Pass	Serum	6400	400	6400	36	Positives
maf3279-a001	C0119	Positive	Pass	Serum	1600	100	1600	20	Positives
maf3279-a001	C0122	Positive	Pass	Serum	400	100	400	24	Positives
maf3279-a001	C0127	Positive	Pass	Serum	400	400	1600	23	Positives
maf3279-a001	C0132	Positive	Pass	Serum	1600	1600	6400		Positives
maf3279-a001	C0136	Positive	Pass	Serum	6400	400	6400		Positives

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0144	Positive	Pass	Serum	6400	1600	6400	21	Positives
maf3279-a001	C0153	Positive	Pass	Serum	400	100	400	31	Positives
maf3279-a001	C0160	Positive	Pass	Serum	1600	100	1600	17	Positives
maf3279-a001	C0161	Positive	Pass	Serum	400	100	400	25	Positives
maf3279-a001	C0164	Positive	Pass	Serum	1600	400	6400	23	Positives
maf3279-a001	C0172	Positive	Pass	Serum	1600	400	1600	19	Positives
maf3279-a001	C0176	Positive	Pass	Serum	6400	400	6400	19	Positives
maf3279-a001	C0180	Positive	Pass	Serum	6400	1600	6400	24	Positives
maf3279-a001	C0191	Positive	Pass	Serum	400	100	400	22	Positives
maf3337-a001	C0031	Positive	Pass	Serum	1600	400	6400	21	Positive
maf3337-a001	C0145	Positive	Pass	Serum	6400	1600	6400	17	Positive
maf3337-a001	C0152	Positive	Pass	Serum	400	400	6400	24	Positive
maf3337-a001	C0187	Positive	Pass	Serum	6400	6400	6400	29	Positive
maf3337-a001	D0012	Positive	Pass	Serum	6400	100	6400	28	Positive
maf3337-a001	D0020	Positive	Pass	Serum	1600	400	6400	42	Positive
maf3337-a001	D0022	Positive	Pass	Serum	400	100	1600	46	Positive
maf3337-a001	D0028	Positive	Pass	Serum	6400	400	6400	32	Positive
maf3337-a001	D0084	Positive	Pass	Serum	1600	100	1600	41	Positive
maf3337-a001	D0104	Positive	Pass	Serum	400	100	400	17	Positive
maf3337-a001	D0149	Positive	Pass	Serum	400	100	400	43	Positive
maf3337-a001	D0159	Positive	Pass	Serum	100	100	400	24	Positive
maf3337-a001	D0161	Positive	Pass	Serum	1600	100	1600	44	Positive
maf3337-a001	D0180	Positive	Pass	Serum	6400	400	6400	39	Positive
maf3337-a001	D0188	Positive	Pass	Serum	400	400	1600	24	Positive
maf3337-a001	D0201	Positive	Pass	Serum	100	100	400	33	Positive

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	D0205	Positive	Pass	Serum	400	400	1600	26	Positive
maf3337-a001	D0206	Positive	Pass	Serum	1600	100	1600	25	Positive
maf3337-a001	D0208	Positive	Pass	Serum	400	100	1600	22	Positive
maf3337-a001	D0210	Positive	Pass	Serum	1600	100	1600	26	Positive
maf3279-a001	C0001	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0002	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0004	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0005	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0008	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0011	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0012	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0014	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0016	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0020	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0024	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0027	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0029	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0032	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0033	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0034	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0041	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0043	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0044	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0048	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0050	Negative	Pass	Serum	0	0	0		Negatives

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0051	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0058	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0059	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0062	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0063	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0065	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0066	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0067	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0069	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0070	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0072	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0073	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0079	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0081	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0083	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0087	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0094	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0095	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0098	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0100	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0101	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0109	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0110	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0115	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0116	Negative	Pass	Serum	0	0	0		Negatives

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0117	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0118	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0120	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0121	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0126	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0128	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0131	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0139	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0140	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0146	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0156	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0158	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0165	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0169	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0173	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0174	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0179	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0181	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0185	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0186	Negative	Pass	Serum	0	0	0		Negatives
maf3279-a001	C0193	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0198	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0199	Negative	Pass	Plasma	0	0	0		Negatives
maf3279-a001	C0200	Negative	Pass	Serum	0	0	0		Negatives
maf3337-a001	C0019	Negative	Pass	Plasma	0	0	0		Negative

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	C0026	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0075	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0103	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0105	Positive	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0133	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0134	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0137	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0162	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	C0196	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0007	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0011	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0015	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0027	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0034	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0047	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0049	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0056	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0058	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0064	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0073	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0083	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0086	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0094	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0097	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0115	Negative	Pass	Serum	0	0	0		Negative

Table 5: Line Data (independent samples) (continued)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3337-a001	D0120	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0123	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0126	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0128	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0130	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0131	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0132	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0135	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0141	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0142	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0145	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0148	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0153	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0154	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0158	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0166	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0169	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0170	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0173	Negative	Pass	Serum	0	0	0		Negative
maf3337-a001	D0184	Negative	Pass	Plasma	0	0	0		Negative
maf3337-a001	D0187	Negative	Pass	Plasma	0	0	0		Negative
maf3279-a001	C0018	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0054	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0089	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0093	Negative	Pass	Plasma	0	0	0		HIV+

Table 5: Line Data (independent samples) (*continued*)

Evaluation ID	Sample ID	(IgM / IgG) Result	Control	Type	CDC Spike Pan-Ig Titer	CDC Spike IgM Titer	CDC Spike IgG Titer	Days	Group
maf3279-a001	C0099	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0138	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0150	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0155	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0182	Negative	Pass	Plasma	0	0	0		HIV+
maf3279-a001	C0197	Negative	Pass	Plasma	0	0	0		HIV+